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1 RECORD OF ORAL HEARING

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3 U.S. PATENT AND TRADEMARK OFFICE

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6 BEFORE THE BOARD OF PATENT APPEALS  
7 AND INTERFERENCES

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10 *Ex parte* GEORGE THAGARD III and NICOLAE ACHIM

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13 Appeal No. 2010-003726  
14 Application No. 10/772,049  
15 Technology Center 1700

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18 Oral Hearing Held: February 9, 2011

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21 Before CHUNG K. PAK, PETER F. KRATZ and CATHERINE TIMM,  
22 *Administrative Patent Judges.*

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24 APPEARANCES:

25  
26 ON BEHALF OF THE APPELLANT:

27  
28 DANIEL ALTMAN, ESQUIRE  
29 Knobbe, Martens, Olson & Bear, LLP  
30 2040 Main Street  
31 Fourteenth Floor  
32 Irvine, California 92614

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35 The above-entitled matter came on for hearing on Wednesday, February 9,  
36 2011 commencing at 10:24 a.m., at the U.S. Patent and Trademark Office,  
37 600 Dulany Street, Alexandria, Virginia, before Paula Lowery, Notary  
38 Public.  
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P R O C E E D I N G S

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THE USHER: Good morning. Calendar Number 38, Appeal Number 2010-003726, Mr. Altman.

JUDGE PAK: Mr. Altman, welcome.

MR. ALTMAN: Thank you, good morning.

JUDGE PAK: You have 20 minutes to argue your case. We have a court reporter here today who is going to transcribe the entire hearing, and that transcript will become part of the record.

With that in mind, you can start your argument any time you wish.

MR. ALTMAN: In this case, the Examiner rejected the claims over this Roy reference. The Examiner wasn't entirely clear. He said "or in view of Zhang", and it appears that he's using Zhang only for the dependent claims. So the focus is on Roy.

The Examiner himself pointed out some differences between Roy and what the claimed invention was. The claimed invention has multiple mixing heads and particular mixing heads, and also arranges the ingredients in a different way.

How the Examiner characterized this was just different ways of doing things that are within the purview of those having skill in the art. We don't agree with that.

The prior art, both Roy and Zhang, is the same Applicant, or the same company, as the present application. The Roy reference itself goes back to 1980. The clients here, the assignee, have been working in this area for a long time to try to make this process work.

1 What the difficulty is they're trying to add asphalt to polyurethane foams,  
2 and polyurethane foams themselves have been around a long time. They're  
3 trying to add asphalt to it to make these waterproof roofing tiles that look  
4 like concrete or a slate roofing tile, but it's made of these less expensive  
5 materials. So that's been their goal. To create this material that is an  
6 asphaltic polyurethane foam.

7 They encountered a lot of difficulties, so the Roy process itself, even though  
8 it's been around now over 30 years, they could never commercialize it. The  
9 reason why they had trouble trying to find the right permutation of steps and  
10 equipment and so forth to make it work.

11 What happened was the range of temperatures that's shown in the Roy  
12 patent, I think it's 140 to 200 -- when they went to the top end of that range  
13 at 200, they could overcome this problem that they saw that occurred at the  
14 lower end of the range. The problem was the asphalt would separate from  
15 the other materials or the foam.

16 But when they went to that high temperature, what would happen is the  
17 reaction would become so violent that the material would start to polymerize  
18 before it went into the mold, and it turned into, basically, a big mess.

19 So they worked on this for a long time and tried to figure out what the  
20 proper permutation of ingredients, equipment, et cetera, was. That's what  
21 the present application is about. It's the ways they've figured out that could  
22 overcome the problems that they saw at both low temperature in the Roy  
23 process, which is that the asphalt would separate from the foam; and at high  
24 temperature, where the reaction became too violent and wouldn't work.

25 So what they discovered is by working around the particular techniques that

1 are shown in the application and that are recited in the claim, that they were  
2 able to make this work. They avoided both the problems of an overly  
3 violent reaction and a separated material.

4 So the Examiner just characterized all this as just all things that are known to  
5 those of skill in the art. Of course KSR does say that combining known  
6 ingredients to yield predictable results can be obvious.

7 JUDGE PAK: Counsel, both Roy and Zhang teach premixing an asphalt  
8 with a polyol.

9 MR. ALTMAN: That's right.

10 JUDGE PAK: Subsequently, mixing the mixture with isocyanates, and then  
11 that mixture is injected through the mixing heads.

12 MR. ALTMAN: That's right.

13 JUDGE PAK: So there is no disclosure in either reference as to introducing  
14 an isocyanate mixture and having asphalt and the polyol mixture through a  
15 separate nozzle, and mixing being carried out through an impingement  
16 process, am I right?

17 MR. ALTMAN: That's correct, yes. So that is, of course, the major  
18 distinction between Roy and what's being claimed.

19 JUDGE PAK: Neither Roy nor Zhang mentions such mixing steps.

20 MR. ALTMAN: That's right, neither one of those references has that.

21 JUDGE TIMM: Do you end up with a different product when you change  
22 the mixing steps?

23 MR. ALTMAN: Because you end up with a workable product -- the product  
24 itself chemically would be similar, but what happens is the materials will  
25 separate at the one end in the Roy process, or the materials will react too fast

1 and won't form a molded product.

2 So the molded product itself is different because it's commercially workable,  
3 so it's different in that respect. It's not necessarily chemically different.

4 So that's really what the difficulty is. The Examiner is characterizing this as,  
5 oh, these are all just different things you could do, and it doesn't really make  
6 much difference. Whereas, in fact, we provided a declaration that said you  
7 do get a big difference; and the results are unpredictable.

8 The Examiner's rejection -- and he basically repeated the same rejection in  
9 the Examiner's answer -- he characterized a lot of the rejection as, I guess,  
10 legal platitudes. He said this plus this is prima facie obvious in the absence  
11 of unexpected results.

12 So we provided the declaration to show that, in fact, there are unexpected  
13 results; and the Examiner rejected them, again, really based on legal  
14 platitudes. He gave us a bunch of legal truisms and cited cases, but he  
15 doesn't really apply the cases to the facts of this case.

16 So that's why I felt I needed to come here.

17 So we performed in the declaration -- I assume you've had a chance to see  
18 the declaration.

19 JUDGE TIMM: Yes.

20 MR. ALTMAN: We compared the exact same chemical ingredients  
21 performed in the Roy process, either at high temperature or low temperature,  
22 and the present process; and showed we got a workable product with the  
23 present process, and a nonworkable product with either type of Roy process.

24 JUDGE KRATZ: I think you've given us some well-grounded arguments.

25 I'm not sure exactly whether it's within the purview of the art here either

1 based on the teaching of Roy and Zhang in terms of totally modifying those  
2 processes and switching everything around, putting the asphalt together with  
3 the isocyanate rather than the polyol, and then using the impingement -- you  
4 know, the mixing that you're using.

5 I guess the Examiner has just seen this as another way of conducting the  
6 process to result in the final product, but it's certainly a different way of  
7 conducting the process. We don't have anything in the art, at least, that  
8 suggests doing so that I can see.

9 MR. ALTMAN: Yes, that's certainly true, thank you.

10 JUDGE KRATZ: Just out of curiosity, is there any argument, or do you  
11 have any evidence, that one schooled in the art would even be thinking of  
12 putting things together with isocyanates? Typically, they don't like to put  
13 much with the isocyanates because they're reactive. So that seems like a  
14 direction you normally wouldn't go anyway.

15 You probably don't want to put things like an asphalt that who knows what's  
16 in that asphalt together with such a reactant material. You'd be disinclined  
17 to do that, I would think.

18 MR. ALTMAN: I would think you're right, yes.

19 Certainly, the production of polyurethanes has been well characterized, and  
20 the addition of asphalt is what created the problem here.

21 JUDGE KRATZ: He said something like --

22 JUDGE PAK: Oh, yeah, he said you need a bigger apparatus to get a bigger  
23 production.

24 JUDGE KRATZ: Right. That's the only question I had.

25 JUDGE TIMM: No more questions.

1 JUDGE PAK: We have no more questions, and I think we clearly  
2 understand the issue, and we will resolve this issue in a manner that will take  
3 into consideration your argument related to the novel aspects of your claim.

4 MR. ALTMAN: Thank you.

5 (Whereupon, the proceedings at 10:35 a.m. were concluded.)

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